

Date: Wednesday, 28/01/2009 4:59:56 PM
User: Julie Dawson

Process Sheet

Customer	: CU-DAR001 Dart Helicopters Services	Drawing Name	: FWD LITTER TIE DOWN BRACKET
Job Number	: 45324		
Estimate Number	: 11495		
P.O. Number	:	Part Number	: D3179041
This Issue	: 28/01/2009	S.O. No. :	Drawing Number : D3179 REV C
Prsht Rev.	: NC	Project Number	: N/A
First Issue	: / /	Type	: MACHINED PARTS
Previous Run	: 43973	Drawing Revision	: C
Written By	:	Material	:
Checked & Approved By	: <u>J20 09.01.29</u>	Due Date	: 10/02/2009
Comment	: Est. A1 03.01.09 Added Acid etch end alodine RF Est Rev:B Added Powder Coat 07-07-04 JLM Est Rev:C 08-12-10 add part list DD verified by:JLM	Qty:	8 Um: Each
Additional Product			
Job Number:			
Seq. #:	Machine Or Operation:	Description :	
1.0	D6201	"T" Extrusion <i>8.504V</i>	 <i>(10.5" SCRAP)</i> <i>8.5 09/02/04 91</i>
		Comment: Qty.: 1.0631 f(s)/Unit Total : <u>6.3788 f(s)</u> Material: D6201 (6061-T6 (QQ-A-200/8) 4" x 4" x 3/8" Thick 'T' extrusion <u>B43959</u>	Batch: <u>43959</u> <u>H.A 09/02/01</u>
2.0	BAND SAW	BAND SAW	 <i>8.5 09/02/04</i>
		Comment: BAND SAW Cut blanks: 12.150" long	<u>H.A 09/02/01</u>
3.0	HAAS1	HAAS CNC VERTICAL MACHINING #1	
		Comment: HAAS CNC VERTICAL MACHINING #1	<i>(8)</i>
		1- Mill as per Folio FA297 Rev: <u>C</u> & Dwg D3179-1 Rev: <u>C</u>	<i>(8)</i>
		2-Deburr per dwg D3179-1	<u>H.A 09/02/05</u>
4.0	QC2	INSPECT PARTS AS THEY COME OFF MACHINE	 <i>(8)</i>
		Comment: INSPECT PARTS AS THEY COME OFF MACHINE	<u>H.A 09/02/05</u>
5.0	QC8	SECOND CHECK	 <i>(8)</i>
		Comment: SECOND CHECK	<i>mk 09/02/08</i>

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Date: Wednesday, 28/01/2009 4:59:57 PM
User: Julie Dawson

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: FWD LITTER TIE DOWN BRACKET

Job Number: 45324

Part Number: D3179041

Job Number:



Seq. #: Machine Or Operation:

Description :

6.0 HAND FINISHING1

HAND FINISHING RESOURCE #1



(8)

Comment: HAND FINISHING RESOURCE #1

Acid etch and Alodine as per QSI 005 4.1

FD 09/02/09

7.0 QC3

INSPECT POWDER COAT/CHEMICAL CONVERSION



(8)

Comment: INSPECT POWDER COAT/CHEMICAL CONVERSION

8.0 POWDER COATING

POWDER COATING



Comment: POWDER COATING

Powder Coat White Gloss (Ref: 4.3.5.1) as per QSI 005 4.3

M 109996

(8)

START TIME: 9:00

OVEN TEMPERATURE: 320°

FINISH TIME: 9:30

BL 09-02-10

9.0 QC3

INSPECT POWDER COAT/CHEMICAL CONVERSION



(8)

Comment: INSPECT POWDER COAT/CHEMICAL CONVERSION

09-02-10

10.0 D2372

Quick Release



Comment: Qty.: 2.0000 Each(s)/Unit Total: 12.0000 Each(s)

Quick Release

batch: B41426

EP 09/02/12

11.0 D2444

Pip Pin Assembly



Comment: Qty.: 1.0000 Each(s)/Unit Total: 6.0000 Each(s)

Pip Pin Assembly

batch: B45387

EP 09/02/12

12.0 MS21042L3

Nut



Comment: Qty.: 1.0000 Each(s)/Unit Total: 6.0000 Each(s)

Nut

batch: M109798

EP 09/02/12

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

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Drawing Name: FWD LITTER TIE DOWN BRACKET

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Part Number: D3179041

Job Number:



Seq. #: Machine Or Operation:

Description :

13.0 MS27039113 Screw



Comment: Qty.: 1.0000 Each(s)/Unit Total : 6.0000 Each(s)

Screw

batch: M105211

EP 09/02/12

14.0 NAS1149D0332J Washer



Comment: Qty.: 3.0000 Each(s)/Unit Total : 18.0000 Each(s)

Washer

batch: M110625

EP 09/02/12

15.0 SMALL FAB 1 SMALL & MEDIUM FAB RESOURCE 1



Comment: SMALL & MEDIUM FAB RESOURCE 1

Assemble as per Dwg D3179

EP 09/02/12 (8)

16.0 QC5 INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

5 09/02/12 (8)

17.0 PACKAGING 1 PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Identify with P/N and B/N using a permanent fine point marker on bottom face as per dwg, then Stock
Location: _____

10 09/02/12 (8)

18.0 QC21 FINAL INSPECTION/W/O RELEASE



09/02/12 (8)

Comment: FINAL INSPECTION/W/O RELEASE

Job Completion



MF
09-02-12

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

ART AEROSPACE LTD

Work Order: 45324

Description: Fwd Litter Tie down Brachet

Part Number: D3179081

spection Dwg:

Rev: C

Page 1 of 1

D3179 Rev C

FIRST ARTICLE INSPECTION CHECKLIST

 First Article Prototype

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
12.00	$\pm .030$	12.002	✓			
10.500	$\pm .010$	10.002	✓			
8.00	$\pm .030$	8.005	✓			
4.250	$\pm .010$	4.246	✓			
2.875	$\pm .010$	2.872	✓			
1.00	$\pm .030$	1.005	✓			
.500	$\pm .010$.500	✓			
.750	$\pm .010$.751	✓			
1.50	$\pm .030$	1.500	✓			
1.70	$\pm .030$	1.695	✓			
0.750	$\pm .010$.755	✓			
0.97	$\pm .030$.968	✓			
1.625	$\pm .010$	1.604	✗	✗	Acceptable	
1.250	$\pm .010$	1.226	✗	✗	Acceptable	09/02/04
0.375	Ref	.372	✓			
1.86	$\pm .030$	1.840	✗	✗	Acceptable	
3.31	$\pm .030$	3.295	✗	✗	Acceptable	09/02/04
4.00	Ref	3.987	✓			
8.400	$\pm .030$.400	✓			
8.37	$\pm .030$.375	✓			
Ø .191	$\pm .005$ $\pm .001$.193	✓			
Ø .242	$\pm .006$ $\pm .001$.243	✓			

Measured by: S.S / H.A

Audited by: Jmk

Prototype Approval: N/A

Date: 09/02/04 09/02/08

Date: 09/02/08

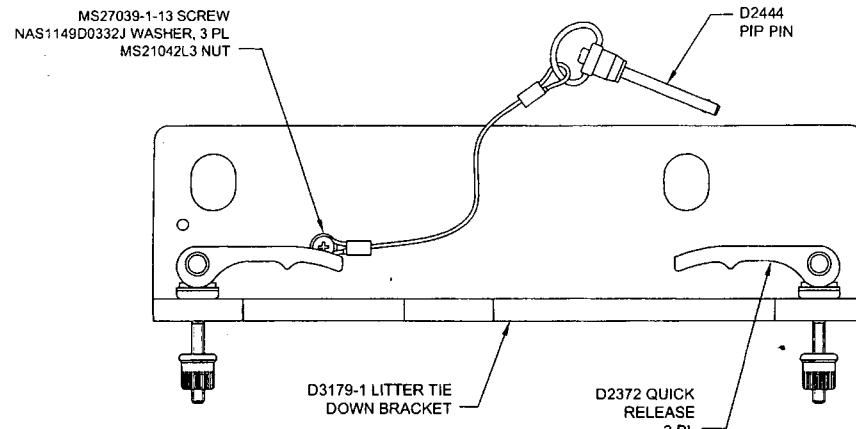
Date: N/A

Rev	Date	Change	Revised by	Approved
		New Issue	KJ/JLM	

P10 D3179-041

8 7 6 5 4 3 2 1

Item	Oty	Part Number	Description
	-041		
1	X	D3179-041	FWD LITTER TIE DOWN
2	2	D2372	QUICK RELEASE
3	1	D2444	PIP PIN
4	1	D3179-1	LITTER TIE DOWN BRACKET
5	1	MS21042L3	NUT
6	1	MS27039-1-13	SCREW
7	3	NAS1149D0332J	WASHER (OR AN960JD10L)



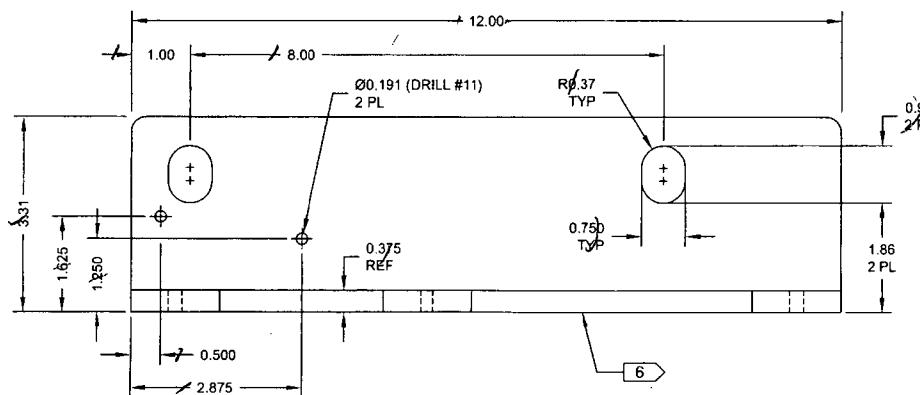
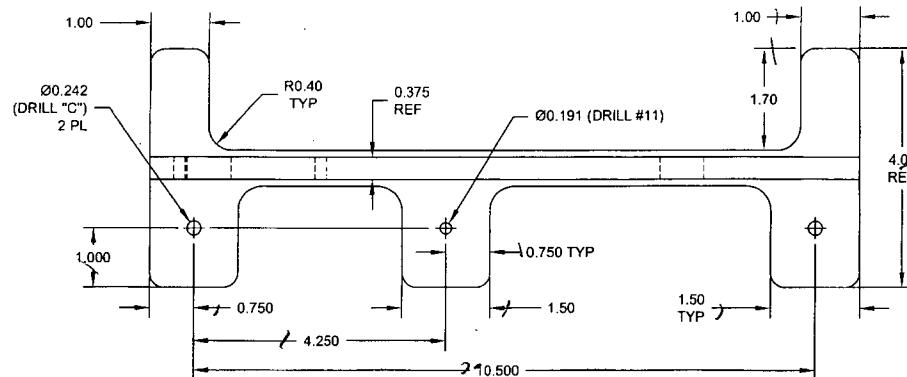
 D3179-041 FWD LITTER TIE DOWN BRACKET

RELEASER
08/11/2011 MTS

C	ADD D3179-041 & PART LIST (ZN B6-1, D2-1); D3179-1 WAS D3179 (ZN A5-2); REMOVE ENGRAVE P/N	RF	08.11.07
B	REFORMAT DRAWING; FINISH WAS ANODIZE	DC	07.06.06
A	NEW ISSUE	RF	02.12.09
REV.	DESCRIPTION		
DESIGN	BW	DART AEROSPACE LTD	
DRAWN	RF	HAWKESBURY, ONTARIO, CANADA	
CHECKED		DRAWING NO.	REV. C
MFG. APPR.		D3179	SHEET 1 OF 2
APPROVED		TITLE	SCALE
DE APPR.		LITTER TIE DOWN BRACKET	NTS
DATE	08.11.07	COPYRIGHT © 1995 BY DART AEROSPACE LTD THE DOCUMENT CONTAINED HEREIN IS THE PROPERTY OF DART AEROSPACE LTD. IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	

NOTES:
1) D3179-041 WEIGHT: 2.79 lbs

SHOP COPY
RETURN TO
ENGINEERING
(1) CONTRACTOR'S COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORKS NO. 45324



D3179-1 LITTER TIE DOWN BRACKET

NOTES:

NOTES

- 1) MATERIAL: MAKE FROM D6201-012 EXTRUSION
(6061-T6/T6511 PER QQ-A-2008)
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
POWDER COAT WHITE (4.3.5.1) PER DART QSI 005 4.3
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY WITH DART PIN D3179-1 USING FINE POINT
PERMANENT INK MARKER ON THE BOTTOM FACE
- 7) WEIGHT: 2.3 lbs

DESIGN	BW	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	RF		
CHECKED	<i>PA</i>	DRAWING NO.	REV. C
MFG. APPR.	<i>Sgt</i>	D3179	SHEET 2 OF 2
APPROVED	<i>WV</i>	TITLE	
DE APPR.	<i>WV</i>	LITTER TIE DOWN BRACKET	
DATE	08.11.07	NTS	

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